

In the claims:

Please amend the claims as follows (note that all pending claims are printed for the Examiner's convenience):

26. ~~(Amended) An interface device capable of communicating with a~~
computer running an interactive computer application and generating a graphic image, the interface device comprising:

a peripheral device in communication with the computer and capable of being translated linearly in three dimensions by a user, the peripheral device comprising a force applying element adapted to apply a force to the user, the force applying element comprising a surface adapted to contact the user and a link coupled to the surface, and

a sensor coupled to the peripheral device to detect a position of the peripheral device to control the graphic image, the sensor comprising an encoder,

wherein the force applying element applies a force to the user based on the interaction of the graphical image with a graphical object.

27. An interface device according to claim 26 wherein the encoder is an optical encoder.

28. An interface device according to claim 26 wherein the peripheral device is capable of being moved in six degrees of freedom.

29. (Amended) An interface device according to claim 26 further comprising a cable connected to the link for forcing the force applying element.

30. An interface device capable of communicating with a computer running an interactive computer application and generating a graphic image, the interface device comprising:

a peripheral device in communication with the computer and capable of being manipulated by a user, the peripheral device comprising a first force applying element adapted to apply a force to a first portion of the user and a second force applying element adapted to apply a force to a second portion of the user; and

a sensor coupled to the peripheral device to detect a position of the peripheral device to control the graphic image,

wherein the force applying elements apply forces to the first and second portions of the user based on the interaction of the graphical image with a graphical object.

31. An interface device according to claim 30 wherein the first portion is a finger.

32. An interface device according to claim 31 wherein the second portion is a wrist.

33. An interface device according to claim 30 wherein the sensor comprises an encoder.

34. (Amended) An interface device capable of communicating with a computer running an interactive computer application and generating a graphic image, the interface device comprising:

a peripheral device in communication with the computer and capable of being translated linearly by a user, the peripheral device comprising a force applying element adapted to apply a force to the user; and

a sensor coupled to the peripheral device to detect a position of the peripheral device to control the graphic image,

wherein the force applying element comprises a surface adapted to contact a portion of the user and a [, a flexible] forcing member coupled to the surface, the forcing member comprising a flexible member and a link having a joint, and wherein the forcing member is coupled to [and] a force activator adapted to provide a force to the forcing member based on the interaction of the graphical image with a graphical object.

35. An interface device according to claim 34 wherein the flexible member is a cable.

36. An interface device according to claim 34 wherein the force activator [forcing member] is a motor.

37. An interface device according to claim 34 wherein the sensor comprises an encoder.

Fig. 81

38. An interface device capable of communicating with a computer running an interactive computer application and generating a graphic image, the interface device comprising:
a peripheral device in communication with the computer and capable of being translated linearly by a user, the peripheral device comprising a force applying element adapted to apply a force to the user; and
a sensor coupled to the peripheral device to detect a position of the peripheral device to control the graphic image,
wherein the force applying element applies a force to the user based on the interaction of the graphical image with a graphical object to simulate a texture of the graphical object.

39. An interface device according to claim 38 wherein the force applying element is adapted to apply a force to the finger.

Please add the following new claims:

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40. (new) An interface device according to claim 26 wherein the link comprises a five-bar linkage.

41. (new) An interface device according to claim 40 wherein one of the bars of the five-bar linkage is a grounded link.

42. (new) An interface device according to claim 26 wherein the force applying element is coupled to a force activator remote from the surface.

43. (new) An interface device according to claim 26 further comprising a spring for tensioning the cable.

44. (new) An interface device according to claim 29 wherein the link comprises a joint and wherein the cable is connected to the link on one side of the joint and further comprising a second cable connected to the link on the opposite side of the joint.

45. (new) An interface device according to claim 30 wherein the peripheral device is capable of being translated in three dimensions.

46. (new) An interface device according to claim 30 wherein the peripheral device is capable of being moved in six degrees of freedom.

47. (new) An interface device according to claim 34 wherein the forcing member further comprises a second flexible member and wherein the first and second flexible members are coupled to the link on opposite sides of the joint.

48. (new) An interface device according to claim 47 wherein the force activator selectively applies tension to one or more of the flexible members to cause rotation of the link about the joint.

49. (new) An interface device according to claim 34 wherein the force activator is remote from the surface and wherein the forcing member is routed from the force activator to the surface.

50. (new) An interface device according to claim 34 further comprising a spring for tensioning the flexible member.

51. (new) An interface device according to claim 34 wherein the peripheral device is capable of being translated in three dimensions.

52. (new) An interface device according to claim 34 wherein the peripheral device is capable of being moved in six degrees of freedom.

REMARKS

Claims 26-52 are presently pending in the case. Claims 26, 29, 34 and 36 have been amended to improve the form thereof, to broaden aspects of the claims, and/or to present the claims in immediate condition for allowance. The amendments have not been made for reason related to patentability. The amendment to claim 36 was made to correct a typographical error.